

# **BULLETIN**

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## **The Preliminary Report of the Association Commission on the Distribution of Colleges**

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**Edited by**

**Robert L. Kelly**

**Executive Secretary of the Association**

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## **REPORT OF THE COMMISSION**

READ BY PRESIDENT THOMAS

There are Committees and Commissions whose Chairmen do all the work and the other members sign carbon copies and return them unamended to the Chairmen, their generous encomiums interspersed with regrets that they have been so much occupied with other matters. Your present Commission is not of that kind. The Chairman has done very little of the work and has served chiefly as compiler of the contributions of his associates and of the valuable and important material placed at the disposal of the Commission and of its members in the pursuit of their particular studies by Dr. Robert L. Kelly, Executive Secretary of the Association. The Commission is also indebted to Dr. Clyde Furst, Secretary of the Carnegie Foundation, for helpful counsel and co-operation.

### **QUESTIONS CONSIDERED**

The Commission has endeavored to formulate a judgment as to whether or not there are too many colleges in their particular studies by Dr. Robert L. Kelly, Execu-

the United States, to estimate the probable growth of our present colleges, and to inquire as to the need for the establishment of new institutions. We have studied the influence of transportation on the establishment of colleges and in the Executive Secretary's office maps and charts of great interest and importance have been prepared showing the relation of transportation systems to the development of the nation's educational facilities, as well as charts illustrative of other phases of our inquiry. Investigation has also extended to the relation between denominational strength and the location of church affiliated colleges, and to the question as to how many high school graduates there should be in a territory to warrant the founding of a college.

#### HOW MANY COLLEGES ARE NEEDED?

If we attempt to answer how many colleges are needed in the United States, we must set up some estimate of the number of American youths who will profitably attend college in the next fifty years. At the present time, if we define a college as an institution of higher learning requiring for admission the completion of a four-year standard high school course or its equivalent, we include as colleges not only all institutions ordinarily so listed, but also all teachers' colleges (normal schools), admission to which is based on a four-year high school course, all types of technical and other schools based on completed high school work, but we exclude the graduate schools and colleges based on college graduation.

While no very definite figure for the number included within this classification can be obtained, the best estimate we can secure points to 500,000 young men and women in college, technical school, or teachers' college this year. (455,000 in colleges and technical schools and 45,000 of college grade in normal schools.) With the population of the United States 106,000,000 this would mean an average of 1 college student per 212 population. This estimate is probably low.

In Ohio with a population of 5,750,000 there are about

27,000 students this year, or 1 student to 213 population. In the cities of Columbus, Salt Lake, Pittsburgh, Seattle, and Cincinnati, all large cities within which one or more colleges are located, the enrollment of local students was 1 to 145, 145, 147, 150, and 185 respectively.

These several figures would seem to indicate that where educational facilities are adequate we should at the present time have provision in colleges for about 1 in every 200 of our population.

Or, stating it another way, the territory that has adequate educational provision for less than 1 in 212 of its population is less adequately equipped in this line than the average needs of the country demand at the present time.

If we are willing to accept these figures as a rough approximation of the present needs for college training, what should we anticipate as the probable needs in the next few decades?

The answer to this question depends upon so very many variables that only a crude guess can be made. There is, however, some basis for a guess. The college is first dependent on the high school graduates for its supply of students. The growth of the public high schools during the last 20 years has been prodigious, and the growth shows no decline. There is further a distinct movement in the states to provide high school education for all the youth of high school age who will take it, and there is a constant broadening of the high school curriculum which increases the public interest in the high school course. At present from 18% to 50% of the high school and secondary school graduates enter college. (Bureau of Education estimates average of 28% for public high schools and 39.2% for private.)

We can safely assert that the total number of high school graduates is rapidly increasing, that the interest in high school is largely increasing and that over 30% of high school students enter college. It is certainly evident that no serious diminution of the supply of high school graduates to the colleges immediately confronts us.



If now the high school facilities continue to grow with increasing demand, should we look forward ultimately to having all youth of 18-22 in college? Assuming the figure of the draft boards, that there are 1,000,000 men in each year of age from 21 to 31, we may perhaps safely assume that there are in the country about eight million men and women 18-22 years of age. At the present time 500,000, or 6%, of this number are in college. (Note the statistical department of the Bureau of Education estimates that 3.3% of those persons belonging to the age group from 19 to 23 were in college in 1898 and that 4.8% of this group were in college in 1916. Probably these figures would justify us in assuming that over 5% are in college this year.)

The Army Intelligence Test given to a million and a half men indicated that 15% of our citizens are of "superior or very superior" intelligence, eminently capable of doing college work, and of a capacity that they would profit largely from this training. On the other hand, recent tests of some eight thousand college students in residence last year in two institutions showed 80% of the entire enrollment of "superior or very superior" intelligence; that is, a part of this select 15% and only 20% of lower intelligence. We could conclude perhaps that when this 15% of highly intelligent youth of our population of college age all go to college we will have reached our maximum college enrollment.

This would mean at present about 1,200,000 in a population of 106,000,000, and; in round numbers, 1 college student in 100 population, or a little more than twice the present relative college population.

These estimates are admittedly crude, yet it is a conclusion worth reaching even tentatively that the United States in its present educational development finds need of college facilities for 1 student to approximately 200 of the population, and that we need not contemplate provision for more than 1 student to 100 population. These estimates may be studied in comparison with the figures recently published by the Institute of Public Service, which has



noted that if the percentage of increase of college attendance from 1914-1920 be maintained to 1950, the United States will have in that year 1,127,500 students. Undoubtedly we shall see a larger college attendance in the years ahead, but we need not react too violently from complaint and criticism over the excess of colleges to alarm that the nation is going bankrupt for college opportunities. It is sufficient to conclude that there is a field for every college reasonably well located and adequately equipped and supported for good college work, together with a reasonable number of new institutions in regions of large growth in population or which are established to meet special needs, and that an important task for the nation is to strengthen the weaker colleges until they are fitted to take their share of the work of educating America's youth in a worthy manner. Of the 673 colleges reported in 1917-18, 495 had less than 500 students, 252 had less than 200 students. Only 178 had 500 students or over. Contemplating a probable increase in enrollment of 40,000 students a year, which perhaps is a reasonable estimate, we may conclude that the development of existing institutions can provide for future needs. We have enough colleges, if they prove to be properly located. i

Undoubtedly a few more colleges will be and should be founded, but apparently we should look more as a nation toward the development and growth of what we have than toward the establishment of others. Further, such additional colleges as may be established should in every case either serve a territory now very poorly served, or it should serve a functional need that can not well be served through existing colleges.

In view of these figures, of the distinct tendency of existing colleges to grow, and of the fact that from an economic point of view colleges should be encouraged to build up enrollment of at least 400 or 500 students, from these considerations it would seem probable that from 400 to 500 good colleges and universities can serve all the students who will probably enroll in America in the next few decades, at least up to 1,000,000.

### WHAT CONSTITUTES A FIELD FOR A GOOD COLLEGE?

The Carnegie Foundation, the General Education Board, and the recent studies of the American Educational Survey all have called attention to the fact that about 50% of the students attending a typical American college come from within a radius of 50 miles of the college. The ultimate size of the college must also bear largely on the question of the ultimate college needs of a territory. On the theory that a college or university of any size can be advantageously maintained, one can justify the establishment and maintenance of some sort of a college any place, or on the other hand argue that one institution in a state is ample provided it is large enough.

In "The Efficient College," a report of the Association of American Colleges (Volume III, Number 2—March 1917) the minimum enrollment in the Efficient College was fixed at 500. An efficient college was shown to be one that offered a reasonably generous range of courses and that had adequate library and laboratory facilities. Such an institution necessitated a considerable expenditure. If the number of students should be small the per capita cost would be very high. As the numbers increased the per capita cost diminished until at an enrollment of 400 to 500 it became nearly stationary and showed little or no decrease for enrollment increase beyond this number. An equipment and staff adequate to an efficient college can handle about 500 students. When this number increases above that figure duplications of staff and equipment are necessary to such a degree that little or no further cut in the per capita cost seems possible.

It seems reasonable then in considering the distribution of colleges that in general we should anticipate the growth of American colleges to 500 or more students, and that we should not regard as generally desirable two or more colleges in a territory that cannot provide a total of considerably more than 500 students.

These statements should in no case be construed as implying that smaller colleges adequately endowed to provide a full staff and generous equipment for a smaller

enrollment are not desirable. Wherever in the country such small colleges are maintained they can do superb work. However, in the face of the enormous increase in the demand for college training and of the wholly inadequate support of the great majority of existing institutions, it would seem most desirable to consider only the most economical method of adequately meeting the situation. From this point of view it does not seem desirable to establish a new college either in a territory lacking a college that cannot be expected ultimately to provide 500 college students, or in a territory where existing colleges growing to an enrollment of 500 students or more can provide adequately for future needs. It also raises the question as to the wisdom of maintaining two or more existing colleges in a territory which does not now and probably never will provide more than a reasonable enrollment for one college.

If now we attempt from the above to state the conditions as to population which should exist for the favorable maintenance of an efficient college, we must proceed somewhat as follows: A college enrolling 500 students will probably have to get 50%, or 250 from within a radius of 50 miles. Assuming that its territory will supply 1 student from every 200 population, the 50-mile radius should include about 50,000 people and should not be largely drawn on by any other nearby college. With unusually excellent high school facilities and enthusiasm for higher education a territory may ultimately send 1 student to college for every 100 of its population. On this basis a population of 25,000 within a 50-mile radius would supply the local enrollment for a college, but this would be unusual.

It is of course to be recognized that old colleges long established on high standards generally draw a much larger percentage of students from outside their local territory. This fact, however, cannot weigh in the foundation of a new college or in considering the future growth of a small weak college. Generally speaking, unless the local field of 50-mile radius can supply half of its desired enrollment it will never be supplied.

State	Population	No. of students on basis of 1 to 200 population	No. of colleges	Students available per college on basis of 1 to 200
Alabama.....	2,348,174	11,740	10	1,174
Arizona.....	333,903	1,669	1	1,669
Arkansas.....	1,752,204	8,761	7	1,251
California.....	3,426,861	17,134	14	1,223
Colorado.....	936,629	4,698	9	522
Connecticut.....	1,380,631	6,903	5	1,380
Delaware.....	223,003	1,115	1	1,115
Dist. of Col.....	437,571	2,187	8	273
Florida.....	968,470	4,842	5	968
Georgia.....	2,895,832	14,479	16	904
Idaho.....	431,866	2,159	2	1,079
Illinois.....	6,485,280	32,426	35	926
Indiana.....	2,930,390	14,651	21	697
Iowa.....	2,404,021	12,020	26	462
Kansas.....	1,769,257	8,846	19	465
Kentucky.....	2,416,630	12,083	12	1,006
Louisiana.....	1,798,509	8,994	8	1,124
Maine.....	768,014	3,840	5	768
Maryland.....	1,449,661	7,248	14	517
Massachusetts...	3,852,356	19,261	18	1,070
Michigan.....	3,668,412	18,342	11	1,749
Minnesota.....	2,327,125	11,635	10	1,163
Mississippi.....	1,790,618	8,953	9	994
Missouri.....	3,404,055	17,020	22	773
Montana.....	548,889	2,744	3	914
Nebraska.....	1,296,372	6,461	10	646
Nevada.....	77,407	387	1	387
New Hampshire...	443,083	2,215	2	1,107
New Jersey.....	3,155,900	15,779	7	2,254
New Mexico.....	450,350	2,251	3	750
New York.....	10,384,829	51,924	34	1,527
No. Carolina.....	2,559,123	12,795	16	799
No. Dakota.....	645,680	3,228	5	645
Ohio.....	5,759,394	28,796	40	719
Oklahoma.....	2,028,283	10,141	7	1,448
Oregon.....	783,389	3,916	8	489
Pennsylvania.....	8,720,017	43,600	43	1,013
Rhode Island.....	604,397	3,021	2	1,510
So. Carolina.....	1,683,724	8,418	15	561
So. Dakota.....	636,547	3,182	6	530
Tennessee.....	2,337,885	11,689	19	615
Texas.....	4,663,228	23,316	14	1,665
Utah.....	449,396	2,746	2	1,373
Vermont.....	352,428	1,762	4	440
Virginia.....	2,309,187	11,545	21	549
Washington.....	1,356,621	6,783	6	1,130
West Virginia.....	1,463,701	7,318	4	1,829
Wisconsin.....	2,632,067	13,160	12	1,096
Wyoming.....	194,402	972	1	972

## THE INFLUENCE OF TRANSPORTATION ON THE DEVELOPMENT OF COLLEGES

The history of Knox College, Galesburg, Ill., contains the statement that the colony which wished to found a community and a college at the same time, first sent to the West an "Exploring Committee" charged to find a location which accorded with certain specifications. The last specification is: "If a place on some great thoroughfare, such as a canal or navigable water cannot be obtained, it will be better to get into the country from 15 to 25 miles from such place, provided the country around be a good farming country. It should, however, be on some important road or where it is probable that such road would be opened."

This incident is interesting not only for its insight on the relation of transportation to college location, but also as an evidence that the colleges of America have not been located without careful consideration of the strategic advantages of their chosen site, as those advantages appeared at the time. This has not been true of all, but it is true of a larger number than is generally believed, since allowance is not always made for changes in transportation methods and systems.

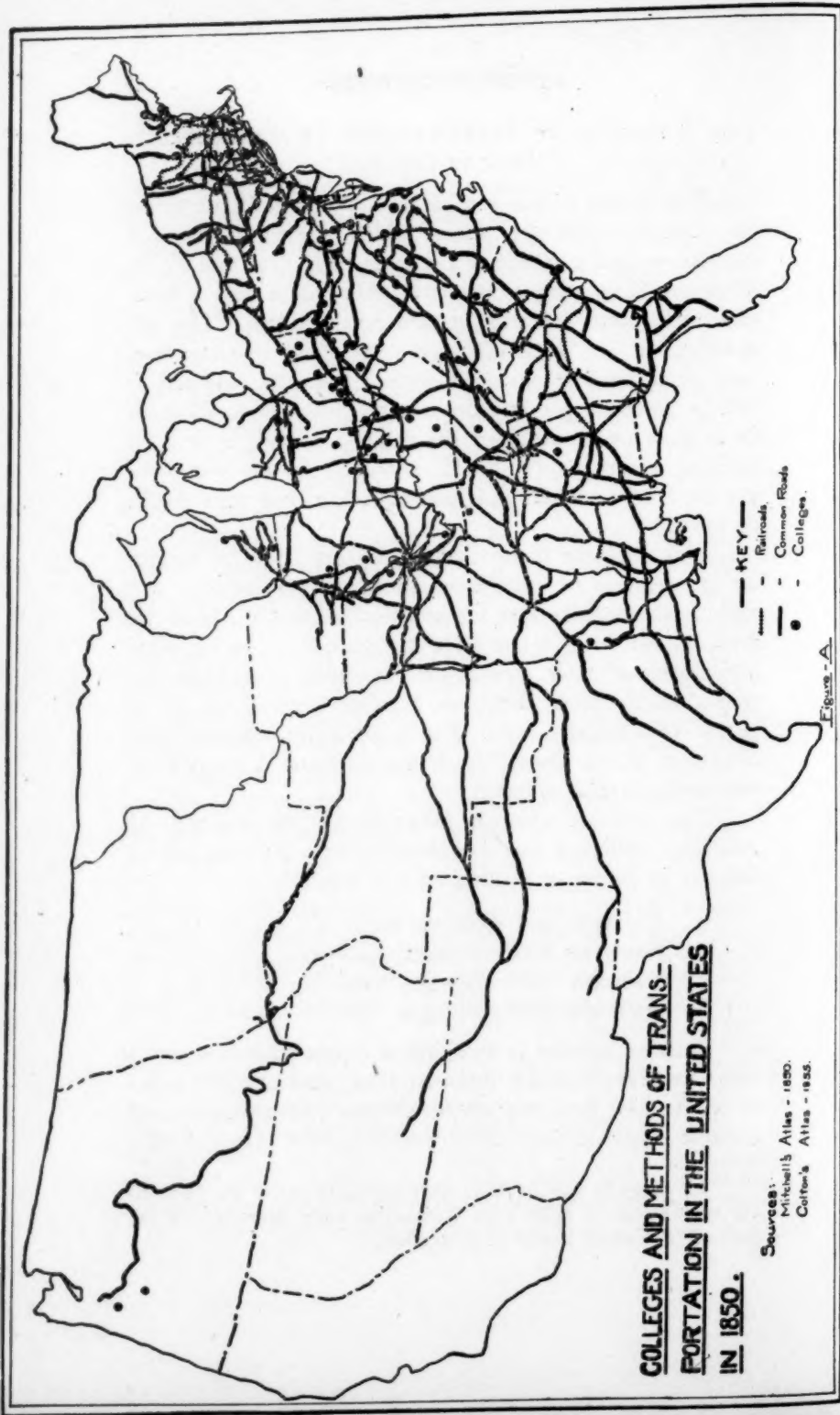
The intimate relation between the development of American railways and the establishment and location of colleges is shown in a series of five maps:\*

- A. Railways and Colleges 1850
- B. Railways 1860; colleges 1850-60
- C. Railways 1870; colleges 1860-70
- D. Railways 1880; colleges 1870-80

Railway mileage in the United States amounted to 23 miles in 1830; to 2,818 miles in 1840; and to 9,021 miles in 1850. The first map shows railway transportation and common roads in the United States in 1850 together with

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\*All maps in this Bulletin were prepared under the immediate supervision of Miss Lura Beam, Associate Secretary of the Council of Church Board of Education.





in the decade 1880 to 1890, studied in conjunction with railways added during the same period.

It is interesting to note the relation of railway and located with some reference to the Oregon Trail and two cannot be found. Transportation west of the Mississippi in 1880 shows every college which can now be located, on

Figure A\* shows the general tendency for colleges to be located on established routes of travel although there were numerous exceptions before 1850. Note the colleges on or near the old National Road from Cumberland, Maryland, to St. Louis, Missouri. A few colleges were on railroads in 1850.

Figure B. The dots indicate numbers, not accurate location. Between 1850 and 1860 about 70 colleges were founded in states having railroads, and ten colleges in states without railroads. More colleges were founded where there was the greatest activity in railroad building.

Figure C. In 1870 there was one transcontinental line and all of the colleges but five founded west of Missouri during the decade 1860-70 were located on or near this line. A few colleges were founded hundreds of miles from any railroad. Whitman was on the old Oregon trail.

Figure D. This figure gives a striking illustration of the relation between railroad construction and the establishment of educational plants.

\*NOTE: The chief authority for the founding of colleges in this map and the maps following is the list prepared by Professor Andrew J. West of Princeton University. It was published under the title "American Colleges" in the monograph "Education in the United States," edited by President Nicholas Murray Butler for the Paris Exposition of 1900.

The maps used are those suggested by the map custodian of the New York Public Library for the periods studied. They have been compared with the maps by decades in "Principles of Transportation" by Emory R. Johnson, (1917) and found to agree in the trunk lines. Mr. Johnson's maps are more conservative and vary in certain minor branches. It therefore seems likely that atlases published several years after the decade may contain more than the roads established at the precise end of the period.

RAILWAY TRANSPORTATION IN THE UNITED STATES, 1860 —  
COLLEGES FOUNDED IN THE DECADE 1850-1860 —●—



from Blocks Atlas - 1865

Figure - B.

a railroad. This is also the case with the colleges founded colleges founded in the United States up to that period, according to the list sponsored by Professor Andrew West of Princeton University in his paper, "American Colleges."

The next map shows railway transportation in the United States in 1860 together with colleges founded in the decade 1850 to 1860. They are not located exactly, merely put in the state, but it is easy to see that with small exceptions the increase is in the part of the country which is developing a net work of railways. The first transcontinental road was established in the decade 1860 to 1870. Seven institutions are located on the railroad, two are college development in Ohio and Virginia, as shown in the two maps:

F. Railways and Colleges, Ohio, 1878

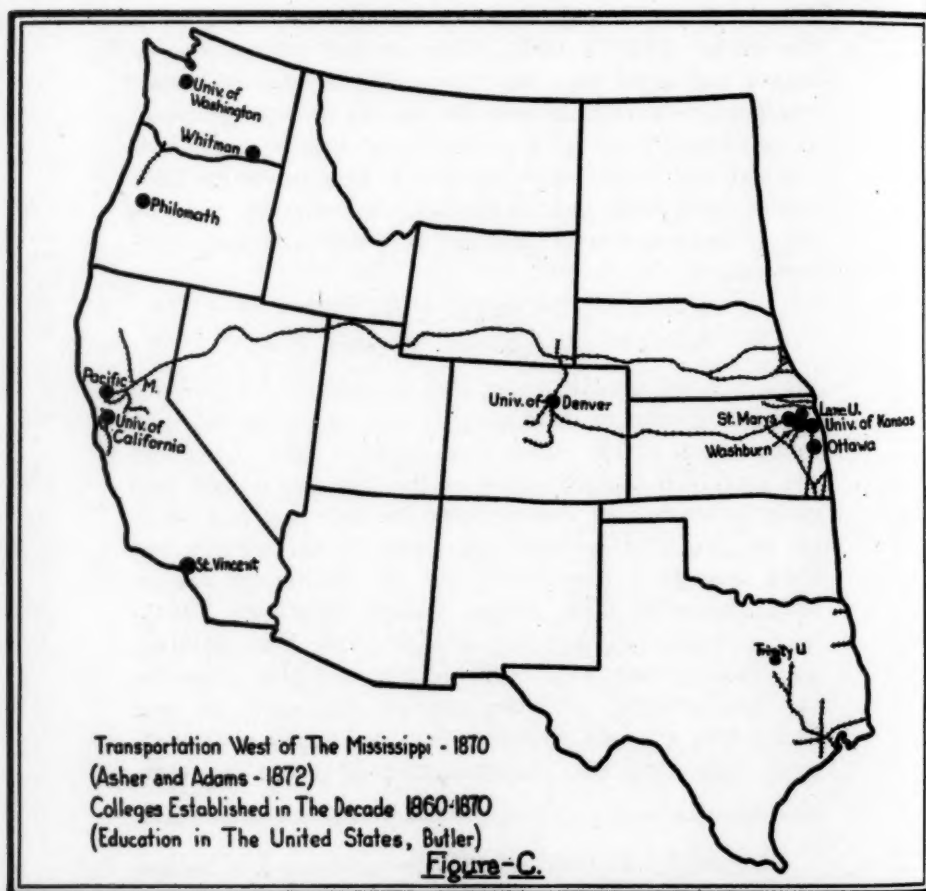
E. Railways and Colleges, Virginia, 1850

Ohio is taken for the reason that the center of population was just getting to it, crossing it, and going beyond it in every decade of the census from 1850 to 1890. Choice of the year 1878 depends partly on the fact that a good land commissioner's map was available for that year and partly on the fact that by that time many of the colleges had lived through a generation. All the institutions are on railroads except three, Hiram College (Disciple), Franklin (Anti-slavery), and Rio Grande (Free Will Baptist), and these are very near. The history of higher education in Ohio, however, indicates strongly that each one was founded by a colony with a distinct philosophy usually directly denominational. Approximately 20 groups are repre-

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Figure F. In Ohio by 1878 the tendency had become established not merely to found institutions on railroads but at railroad centers. Note incidentally the number of denominations represented.

Figure E. In 1850 Virginia had eight colleges nearly all of which were on railroad lines. William and Mary was on a waterway.



sented in the founding of 29 institutions. The groups are sometimes the project of an individual, sometimes the project of a colony acting directly, or sometimes the project of a colony through its denomination conference. The Free Will Baptist institution was founded through the bequest of a wealthy donor and turned over to the denomination afterwards. The Farmer's College attempted to appeal to farmers and mechanics as a class by way of investment. Franklin College was founded in the anti-slavery faith and had schisms through all its earlier years.

Virginia is studied in the relationship of its colleges to transportation, both railways and common roads in 1850. This is an older state, founded by people of essentially different tastes and personality. In 1850 all the Virginia institutions were on railways except William and Mary which was founded in 1693 and was located with reference to water ways. Washington and Lee founded in 1749 had gotten one railway connection by 1850 and Hampden Sidney founded in 1776 had gotten one. All these pioneer institutions probably ought to be studied as the projection of personality rather than as the projection of material facilities.

There are many striking points of similarity between the building of the American railways and the institution of American Colleges. Some of these which have been brought out in the studies of Dr. Kelly may be briefly noted. The building of railways and the founding of colleges in the United States have kept remarkably even step. A comparison of a table of the growth of railway mileage and the figures in Dexter's American Education as to colleges established in the 19th century shows that in each

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Figure G. In Montana the general rule is for the railroads to follow the rivers and the high schools and colleges to follow the railroads. A fairly good railroad map of Montana may be made by connecting the high schools with dotted lines. The Helena High School is accredited by the North Central Association.





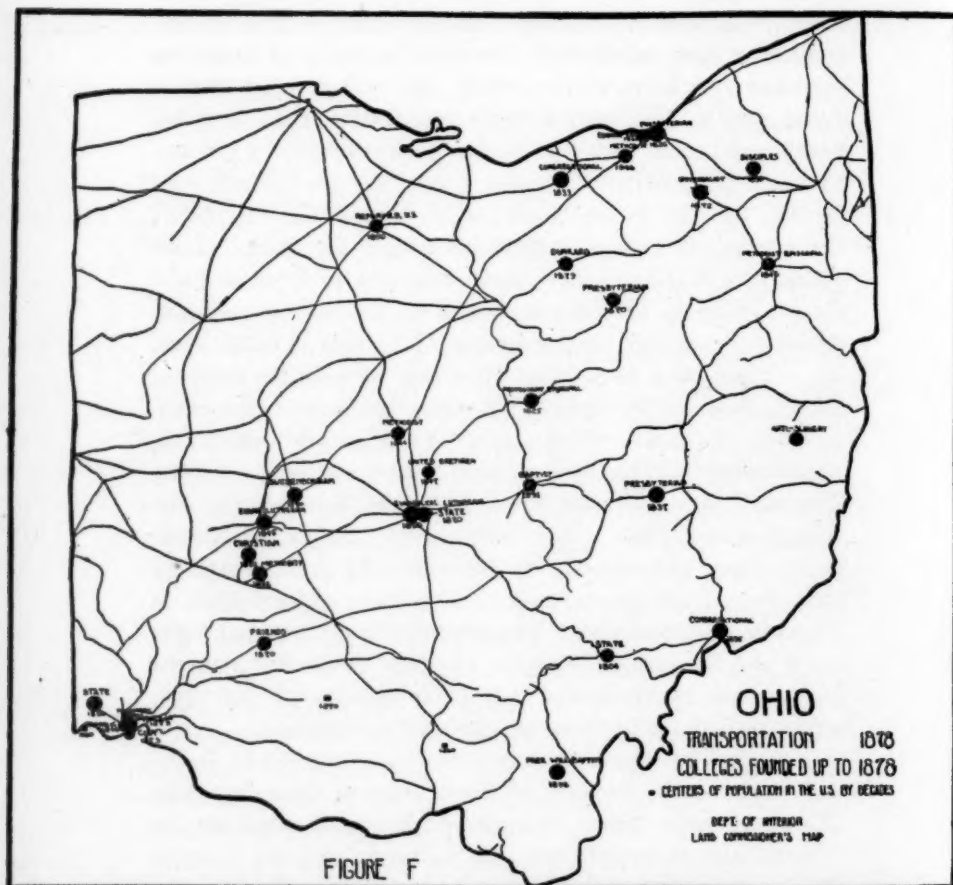
decade as railway mileage has increased the number of colleges has increased in like degree. 1850 to 1860 was the great railway-building era and in that decade more colleges were founded in the United States than in any other of its history. Since 1890 there have been only minor railway extensions and since 1890 comparatively few colleges have been established. The great majority of American railways run from east to west, and college migration is from east to west and west to east rather than between north and south. Railway building leaped west in epochs: first eastern roads to the Great Lakes and the Ohio River; second, Chicago to St. Louis and to Kansas City by 1856: the epochs of college establishment are the same. Both railways and colleges have been recipients of Federal Land Grants. Up to 1870 the ambition of the railway was extension of mileage, improvement of service coming later. Up to the same period the founding of colleges received the emphasis, while latterly the stress has been on improvement of facilities. There is a "railway belt" extending approximately from east to west across the center of the United States, and the same area has been called "the college student belt." The "single track" era of the American railway corresponds to the simplicity and elementary character of college entrance requirements and curricula in the same period of time. Development in the national highways and the service rendered has kept even step with the increase of requirements and improvements in curricula, methods, and facilities in colleges and universities.

Secondary education in connection with railway facilities is shown in the case of Montana and Georgia. The Montana study shows that the high school map can be laid out almost exactly over the railroads, and the Georgia study\* shows too that every high school accredited by the Association of Southern Colleges and Secondary Schools is located at the junction of two or more railways.

The maps of Montana colleges, also colleges of Georgia, Pennsylvania, Oklahoma and Ohio, if divided into

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\*The Georgia map is not reproduced in this issue.



those on the American Council of Education list in 1920 and those not on that list will show that the listed institutions are at trunk lines.

A transportation map of the United States together with all the institutions enumerated on the American Council of Education list for the current year is now being prepared. Also, a second transportation map with all the institutions included in the Bureau of Education Directory for this year, but not listed by the American Council of Education.

#### REGULATION OF THE ISSUANCE OF COLLEGE CHARTERS

It has been an altogether too simple and easy matter to secure a charter for a college or university in the United States. The disposition has been to let any benevolent and ambitious group of people, or even a single individual, see what they could do, and without care or consideration to bestow upon them the invaluable privilege of conferring academic degrees. There should be in every state some constitutional or statutory provision to protect well-meaning persons from needless and even pernicious effort in the establishment of unnecessary colleges and institutions which have no rational prospect of becoming efficient and creditable to American education. For the safeguarding of academic degrees, for the honor of institutions already doing sincere and creditable work, and especially for the protection of youth in their ambition for thorough higher education, there should be enactment in every state somewhat as follows:

SECTION 1. A charter shall not be granted nor shall articles of association be issued to a corporation for educational purposes in this state empowering such corporation to grant degrees, until the State Board of Education shall issue certificate that the creation of such corporation will promote the general good of the state.

SEC. 2. The State Board of Education shall not issue a certificate under the provisions of section one of this act until it is satisfied that the proposed corporation has

# — VIRGINIA IN 1850 —

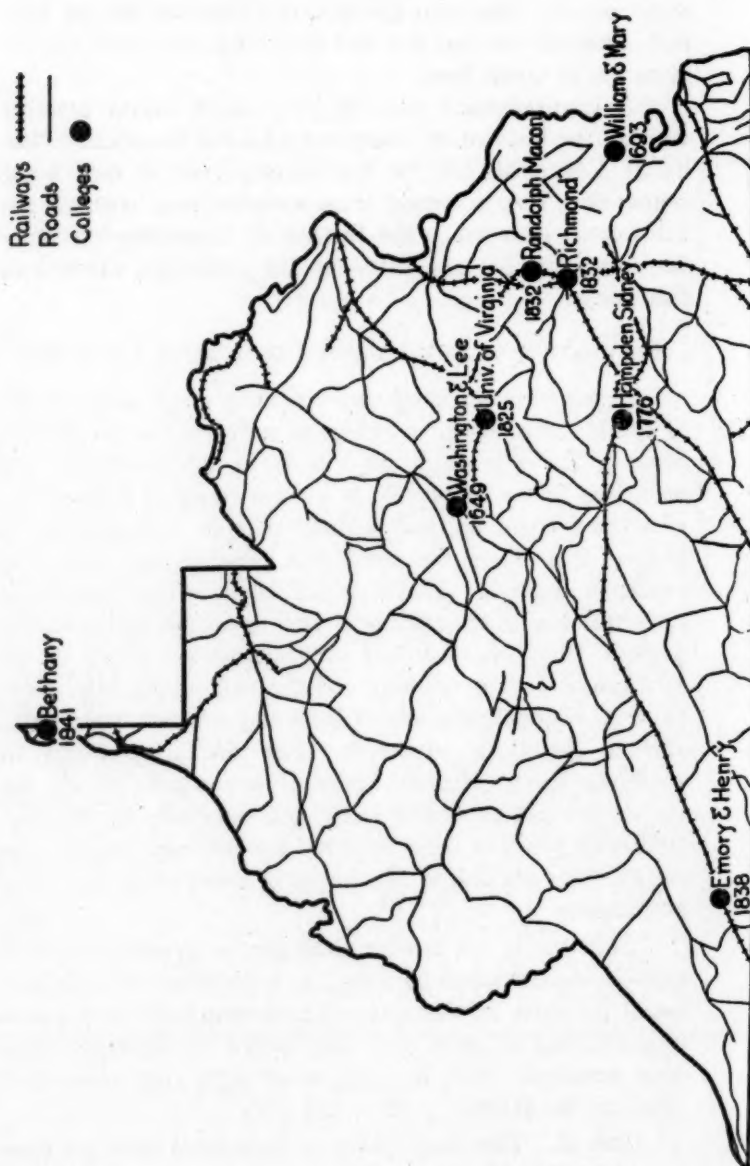


Figure - F

complied with the regulations of said Board for the type of institution for which it desires a charter.

SEC. 3. The State Board of Education shall make regulations defining the various types of degree-granting institutions, specifying the minimum requirements for the issuance of degrees for such institutions and the minimum requirements for admission to such institutions and the said standards to comprehend the amount of endowment, laboratory facilities, library equipment, number of instructors, and scope of curricula.

### CONCLUSIONS

For the reasons stated in this report, the Commission reaffirms its belief that educational progress for the next few decades, in America, would be best attained by the strengthening of existing colleges rather than establishing new institutions. The Commission believes a college should endeavor to grow, in equipment, resources, and student body, to at least 400 or 500. Institutions with sufficient endowment to provide instruction to this number may, perhaps make their largest contribution by limiting their student body to a smaller number, as in the notable case of Haverford.

We believe that this growth can be obtained by

(1) Denominational co-operation in the strengthening of existing colleges, most obviously illustrated by the support the Baptists in Minnesota have decided to give to Carleton, instead of establishing their own college.

(2) In some cases at least, by co-operation with existing state institutions, whereby the state institutions will encourage larger attendance in the colleges, or will definitely aid them to become Junior Colleges, fitting for the professional school of the state Universities. (Note the University of Missouri's arrangement with the Junior Colleges of the state.) The President of a state university has tentatively suggested the allocating in the colleges the applicants for whom the university is unable to care properly. In the cases of small colleges which cannot secure the equip-

# MONTANA: TRANSPORTATION, RIVERS, EDUCATION .

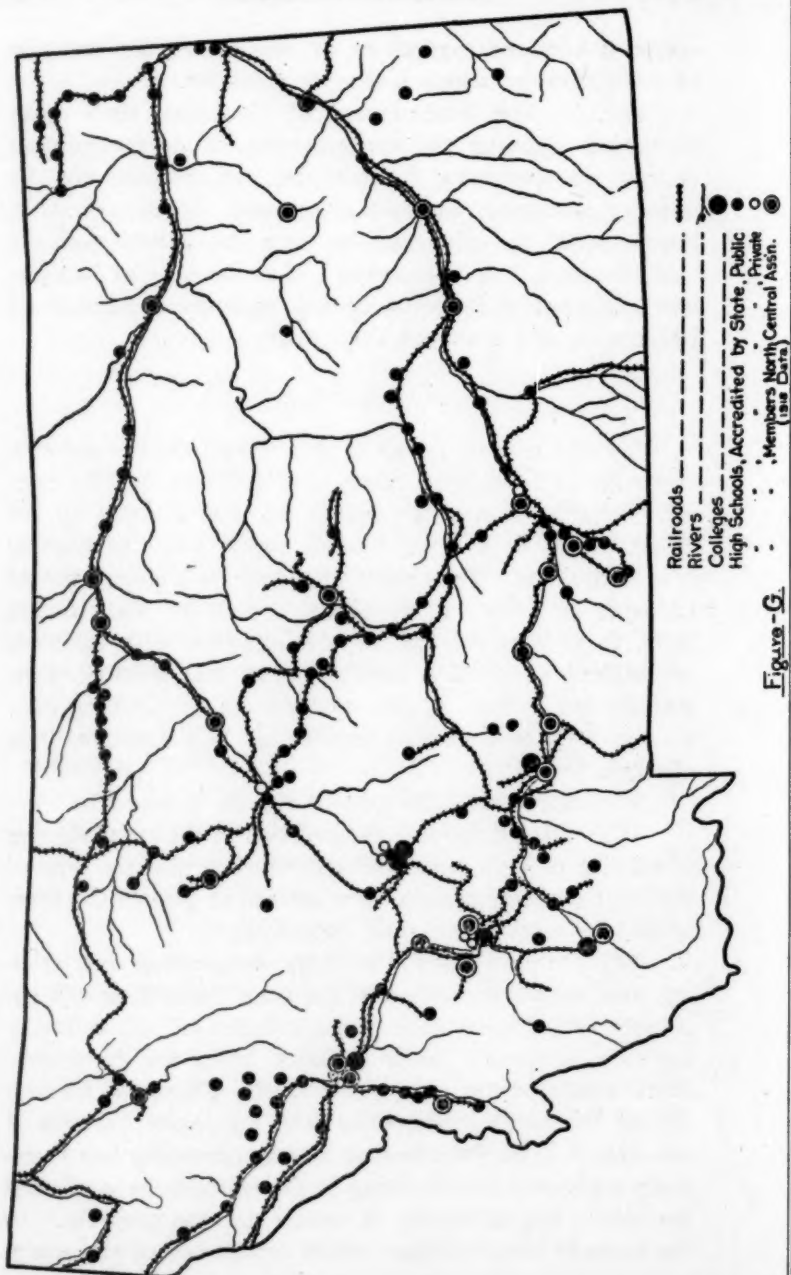


Figure - G.



ment and endowment and student body of an Efficient College, we believe they should definitely face the question of becoming Junior Colleges.

(3) An interesting suggestion has recently been made by Dr. J. E. Bradford, Secretary of the Board of Education of the United Presbyterian Church. He has proposed that one of the great churches of the country, in place of establishing a new college in a somewhat sparsely populated district, enter into an arrangement with the trustees of an existing college, by which they will establish a school of religion adjacent to the campus of the present college. This school would maintain chairs of Bible, Philosophy, Sociology, History, and possibly one or two more subjects. All other college work would be carried in the established college. \$25,000 a year spent in this way will do as much as a much larger sum spent in operating a new college.

(4) The Commission believes existing colleges might with propriety and in the interest of higher education co-operate in the enactment of state legislation safeguarding the issuance of charters for the conferring of academic degrees.

If the above principles are carried out, the Commission believes there will be little necessity of the establishment of new colleges. There are some parts of the country which today are not properly equipped with colleges. In most cases, movements are already under way for the establishment of collegiate institutions in these states. There may be a need for colleges of special types (such as colleges exclusively for women) in certain other sections of the country, although such the Commission believes to be very few.

Before a new college is established, the Commission believes that educational progress will be best attained if the following principles are followed:

(1) A survey of the support upon which the new college can count: population, high school students, denominational. Unfortunately, the day has not yet passed when local pride was the main motive for the establishment of

a college. The Commission believes that this survey should be made by disinterested persons, mainly concerned with educational progress, and some of them, at least, not connected with the denomination interested in establishing the new college.

(2) It should first be conclusively demonstrated that existing colleges cannot solve the problem. An institution has been called to the attention of the Commission which has a college of a similar type a mile and one-half away, another ten miles, another one eighteen miles, and yet ten years ago a fourth was established less than forty miles away. One enrolls 300; one, 200; one, 100; one, 50.

(3) New institutions should always be located on the main lines of travel, near centers of population. This does not mean that they necessarily should be located in cities; yet no new institutions should be located in the part of a new state in which the population is not increasing. While certain long-established institutions violate this principle of accessibility, Dartmouth being the best example, it should not be considered for any newly established colleges.

The Commission is grateful for the opportunity of study of a subject of such great interest and importance, and trusts that its work may prove of some service in strengthening American Colleges.

(SIGNED) JOHN M. THOMAS  
R. M. HUGHES  
JAMES L. MCCONAUGHY

## GENERAL PRINCIPLES FOR DETERMINING THE FIELD AND CONSTITUENCY OF AN EFFICIENT COLLEGE

DR. KELLY

A serious attempt is made here to bring together in small compass and state succinctly certain tests which may be used in determining whether a college now has or is likely to have a field and constituency. Some practical application has already been made of these tests and they have been found surprisingly useful.

One of the Church Boards of Education called on the office of the Association and the Council to make a statistical study of the States of Washington, Oregon and Idaho with a view of making recommendations as to the proposed establishment of a new college at some point in that territory. In Montana there is one small denominational college and a technical secondary school affiliated with a denomination and a study has been made of that state with the hope that combinations may be made which will prevent the suicidal multiplication of institutions without adequate resources. In North Dakota a similar study has been made in view of the fact that Fargo College has offered to amend its charter so that an equal representation of several denominations may be possible in the management of the institution. These tests have been applied in similar investigations in South Dakota, Wisconsin, Michigan, Iowa, Missouri, Kansas, Oklahoma, Colorado, Georgia and Florida. It is the intention later to publish some of these state reports.

It is quite certain there are a number of "constants" in this problem and while it is recognized that there are many variables, it is thought worth while to attempt to define some of the constants.

Confessedly the estimates suggested are general, they deal much with averages, they are largely statistical and they do not undertake to measure the spirit or atmosphere of a college.

The discussion is carried on with the "Efficient College" particularly in mind as defined by the Association of American Colleges. This has the advantage of definiteness and the further advantage of holding up for consideration an ideal which has been generally agreed upon as educationally sound. The discussion does not assume that a college which is not "efficient" in accordance with the terms of the definition is failing to do its present task or is unworthy of consideration and support. A large majority, no doubt of the colleges holding membership in this Association are unable to meet the requirements set forth in the Association's definition. But this fact has not prevented these colleges from attaching significance and value to the definition. It is fair to assume that most colleges aspire to reach the "efficient" class or, at least, would like to measure their own resources and attainments in terms of the Efficient College. For those colleges which profess or aspire to be "Minimum Colleges" as defined by the Association, it will be easy to make the necessary adaptations of the principles. In other words, the principles may be applied to the "minimum" college quite as successfully as to the "efficient" college.

#### 1. TOTAL POPULATION

As set forth by the chairman of the Commission, there is on the average one student enrolled in some type of college out of each 212 of the population of the United States. This counts all types of colleges, including normal schools of college rank. It estimates that of our total population of 106 million, approximately five hundred thousand students are doing work of college grade. A good many tests have already been made which indicate that the average is not far from correct. One in 213 of the population of Ohio is in college. In some of the cities of the country the number of students in college is in the ratio of 1 to 150 or 145. On the average therefore, an "efficient" college should draw from a total constituency of approximately one hundred thousand persons. A "minimum" college should be able to count 20,000 persons.

It is further estimated that about six per cent of the men and women of college age are in college and if the Army Intelligence Test of native capacity may serve as a guide, there is not much probability that more than fifteen per cent of the men and women of college age will enter college. While this is a prognostication, it nevertheless appears to be a fairly safe conclusion that the number of college students is not likely to much more than double within the next generation. If therefore there were a perfect distribution of college students among existing colleges, which, of course, there cannot be, it would appear that there is no great need for the establishment of large numbers of new colleges. The present agencies, if they could be made to function, would be able to take care of a surprisingly large part of the increasing supply of college students. To say the least, the burden of responsibility is on the founders of a new college. They ought to satisfy themselves and the public as well, that there is a place for the proposed institution in the field of American education.

## 2. RACIAL AND VOCATIONAL FACTORS IN POPULATION

A careful study must be made of the racial and vocational characteristics of the general population. The population of many of our cities and states is so cosmopolitan that these considerations become in certain instances quite dominating. There are certain racial groups whose representatives do not look toward higher education. There are other racial groups which are noted for their interest in such education. It is also probably unfortunately true that the college as yet has not made an appeal to the representatives of certain vocational classes. So long as the offerings of the typical college are essentially unchanged, it will be quite fair to predict that representatives of certain lines of business will not be flocking toward college doors. It is unnecessary to particularize in stating the general principle, but when the principle is applied to a specific case, it is unnecessary to particularize in stating the general principle. One-half of the general population which is claimed as making up the constituency of a given institution is

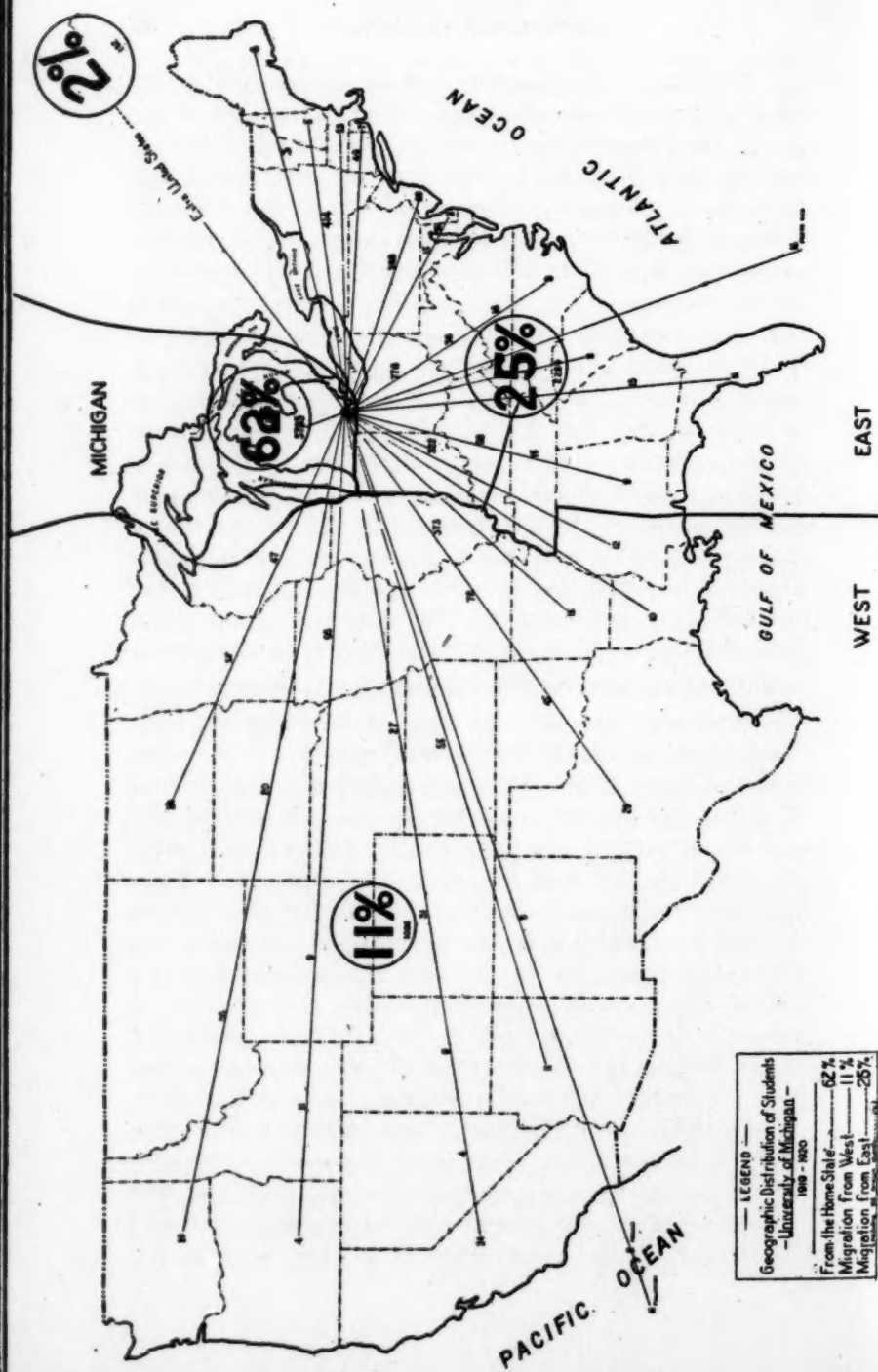


Figure I



found to be made up of racial and vocational groups not particularly interested in college work the fact must be recognized. Such a college will need a general constituency of two hundred thousand. This principle also raises the question as to the policy of a given institution in offering short, correspondence and extension courses, etc., for those parts of the population not interested in the regular college course.

### 3. CHURCH POPULATION

It is a fact now well demonstrated that most of the students in American colleges are affiliated with churches. In general terms, college students are not recruited in relatively large numbers from those parts of the population which claim no church affiliation. It may be estimated that of the total college population of the country from sixty to eighty per cent of the students come from the homes of church members. The proportion varies in different institutions and no one has the means absolutely of determining the exact ratio as applied to all the college students of the country but there is a mass of data which supports the general statement here made. President Burton is authority for the statement that 85 per cent of the total enrollment of the University of Michigan claim church affiliation. In the report of the church census which has recently been taken under the general supervision of Professor Soares, of the students in the University of Chicago, it is asserted that approximately 90 per cent of the students in that institution claim such affiliation. A statement issued and signed by the registrar of Pennsylvania State College sets forth that within a fraction of 95 per cent of the students in that institution express church preference and affiliation. Ninety per cent of the cadets in the United States Military Academy at West Point claim church affiliation, the leading denominations being Episcopal, Methodist, Catholic, Presbyterian. Dean Bouton of New York University states that of the undergraduate students who entered that institution in September, 1920, there were 28.8 per cent of Jewish faith, 31.8 per cent Roman Catholic and

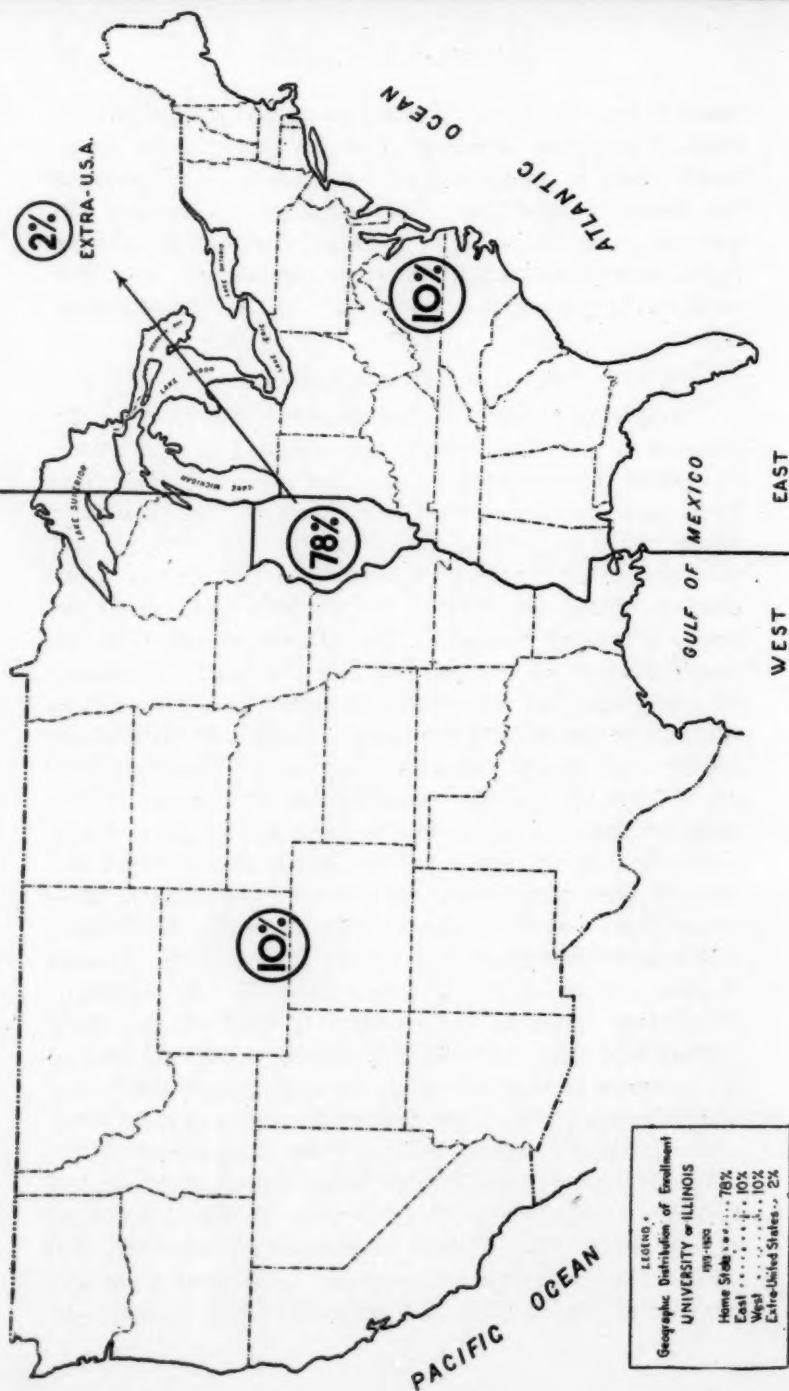


Figure-1

39.4 per cent Protestant, and he believes that these proportions apply approximately to the entire student body at University Heights. Of course, it is well known that in many of the denominational colleges of the country nearly all of the students are members of or are affiliated with churches. The mere fact therefore that a college has one hundred thousand constituency to draw from would lose much of its significance unless it could be shown that a very considerable proportion of that population was connected with the churches. The smaller the ratio of church population, the larger the total population required.

#### 4. HIGH SCHOOL POPULATION

While, as has been shown, the total population and the racial, vocational and church elements of that population are important factors in determining college attendance, neither, nor all together, constitute the most immediate factor. Students who go to college must have been in secondary schools. The college therefore must either have a full quota of secondary students to draw from or must have such in reasonable prospect if it is to even predict increase in attendance. The U. S. Bureau of Education recently issued two comprehensive bulletins giving quite complete statistics of public and private high schools for the year 1917-18.\* From these bulletins and from other available sources many interesting facts and tendencies may be pretty accurately determined for almost any state or section of the country. Not only is it desirable to know what the total number of high school students is within the territory of the college, but as well, the proportion of those who graduate who go to college and the trends of development of secondary schools and their students. The number of public high school graduates entering college varies all the way from 48 per cent in Texas to 18 per cent in Maine. Of private high school graduates a larger proportion go to college than of public high school graduates. More boy graduates go to college than girl graduates from both

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\*Bulletin, 1920, No. 19; Bulletin, 1920, No. 3.

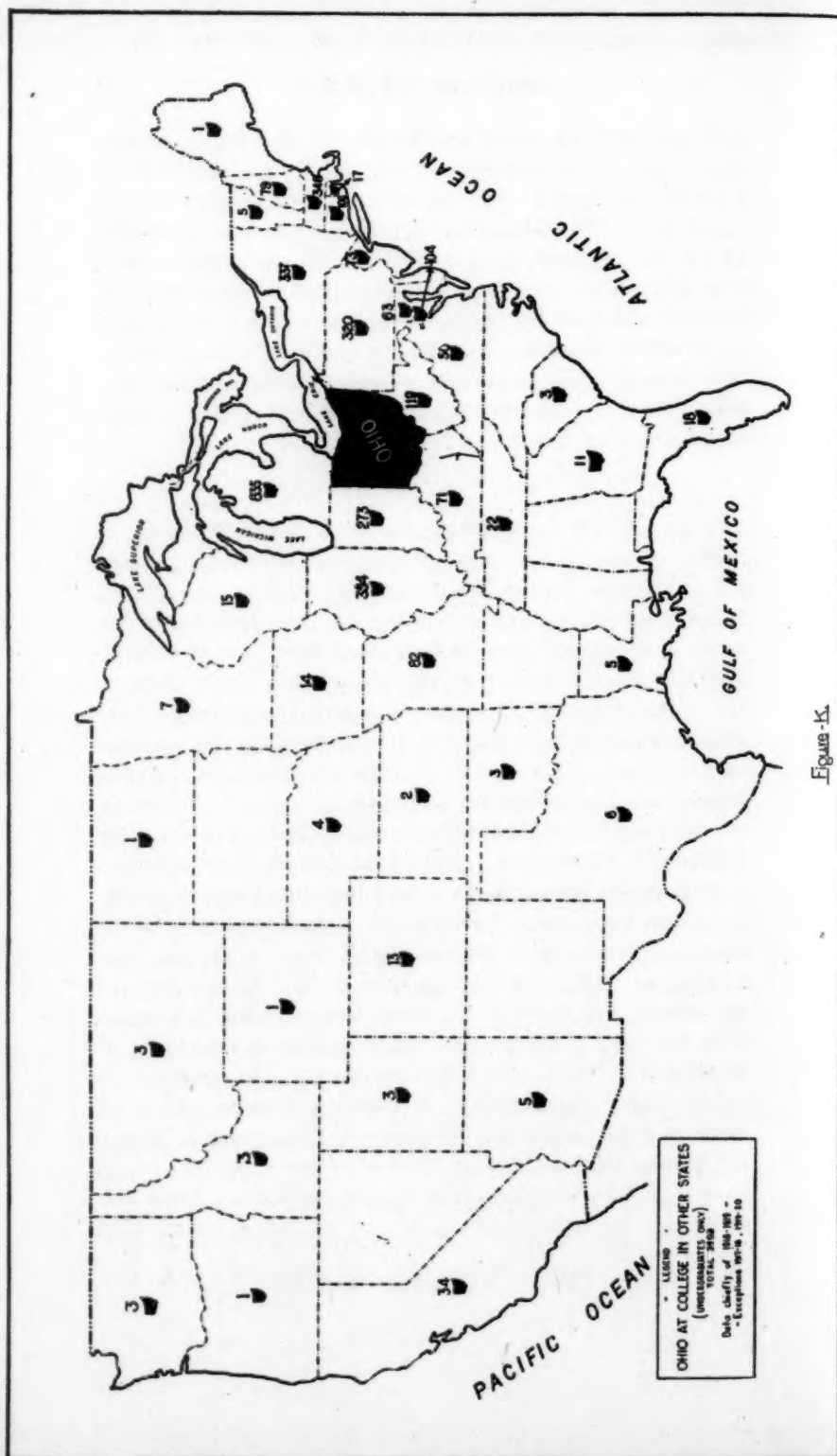


Figure-K

public and private secondary schools. The increase in number of high school graduates during the period from 1890 to 1918 has been over 925 per cent. Since 1890 the total high school enrollment has increased 710 per cent while the total population has increased only 68 per cent. Even with a million six hundred and forty-five thousand one hundred and seventy-one children in the high schools only a very small fraction of the entire population is so enrolled. This proportion has increased almost five times within the last thirty years. California and Kansas lead in this particular.

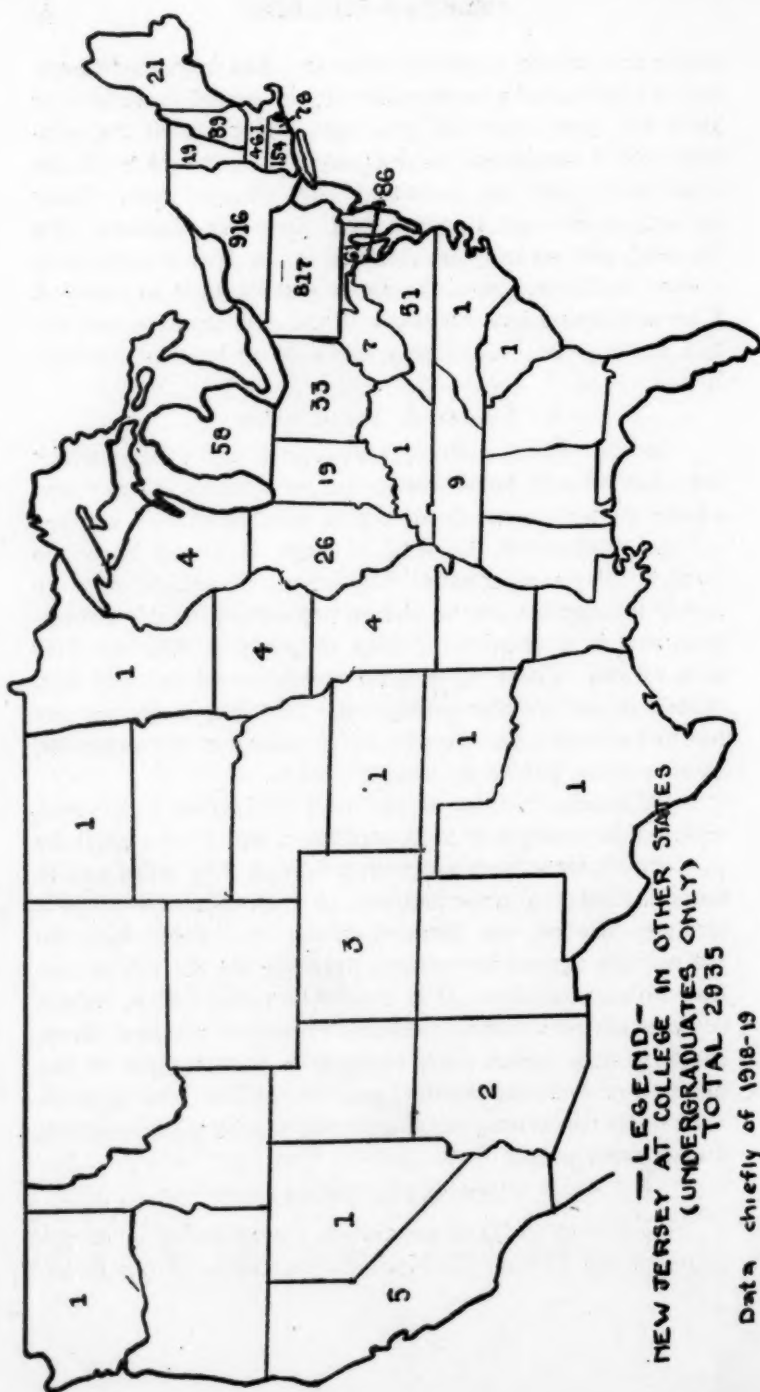
#### 5. LOCAL POPULATION

In the typical college, particularly the college which does not already have prestige, approximately 50 per cent of the students come from within fifty miles. If a given college represented the ideal average, it would have one hundred thousand general population, of which sixty to eighty thousand would be church population, mostly Protestant, and a population of fifty thousand within the fifty mile radius. Check up also on racial, vocational and high school phases of the population. The above figures are not to be given exact mathematical value but are suggested as reasonable guides in making studies.

Of course, certain old and well established institutions violate this principle of local population and draw a majority of their students from a territory beyond fifty miles and in some instances a large number of their students from a territory beyond one hundred miles. But these facts do not militate against the general principle for the typical college without prestige. It is also to be noted that in certain sections of the country, particularly certain western states, the fifty mile radius must necessarily be increased to one hundred or even one hundred and fifty miles. The approximate facts concerning any institution can be made available on all these points.

#### 6. CENTERS OF POPULATION

Significant shifts of population are occurring in several states of the Union. In Montana the centre of population





is moving eastward while in the adjoining state of North Dakota it is moving westward. These movements of population are due to ascertainable causes and will undoubtedly affect the development of colleges. The movement of the centre of population may be away from interests of temporary value and in the direction of stable development. In one state studied eight movements of population have been pointed out, that is, the movement of Indians, Hunters and Trappers, Prospectors, Pioneers, Stockmen, Lumbermen, Miners and Farmers. The significance of these movements of population is seen in the history of colleges founded in response to sectarianism, as aids to real estate booms, etc. The question is, how much and what elements of stability does a given community have and what are the prospects for the future so far as population is concerned.

#### 7. MIGRATION

The October issue of the Association of American Colleges Bulletin contains a report of a study made in this office of the Migration of those college students who are enrolled in the colleges listed by one or more of the following standardizing agencies:\* the Association of American Universities, the North Central Association of Colleges and Secondary Schools, the Southern Association of Colleges and Secondary Schools, and the University of California. The report referred to covers only the colleges in the above named list and eliminates for obvious reasons the large independent and state universities. The striking fact is brought out in this investigation that on the average, 30 per cent of all of the college students of the United States, as defined above, attend college in some other than their own state. The facts are available with reference to the number of students entering and the number leaving each state for institutions on the list. One state draws almost 90 per cent of its college students from other states. Another state holds about 94 per cent of its college students.

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\*List published by the American Council on Education, Washington, D. C.



Not only the numbers, but the directions of migration may be determined for each state. It is evident that more and more migration will be an important factor in determining the field and constituency of a college.

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\*Figure I. Contrary to the usually accepted opinion streams of student migration flow westward as well as eastward. The University of Michigan gets but 11% of its students west of its own state line. Twenty-five per cent come from the West (including Indiana and Kentucky.) The total university attendance is counted including the summer session.

\*Figure J. This is a companion map to Figure I. Manifestly the great universities west of Michigan absorb many students before they reach Ann Arbor. There is a fine balance at the University of Illinois in the matter of migration eastward and westward. The total university attendance is counted including the summer session.

\*Figure K. Ohio sends students to almost every state of the Union and keeps a liberal supply in her own fifty colleges. College education is contagious.

\*Figure L. New Jersey is prodigal of her youth. Almost three thousand of them are accounted for on this map. Besides there were no fewer than 2,924 New Jersey college students in Princeton (295), Rutgers (381), Stevens Institute (281), St. Elizabeth (387), New Jersey College for Women (49), Upsala College (1), and the three state normal schools.

\*Figure M. Montana sends large numbers of her young people to the Eastern and North Central states, a few to the South and the West. Her own institutions are beginning to attract students from outside the state. Data concerning one state institution is missing.

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\*NOTE: College students only are reported. There are about fifteen institutions belonging to the American Council list—mostly technical or Roman Catholic, and usually with small enrollment—concerning which we have no information.

## 8. TRANSPORTATION

There has been a striking parallel between the development of our higher education and our railroad systems although certain ones of the leading colleges of the United States were established consciously in defiance of this general principle. It is certainly true that the era for establishing colleges away from transportation lines has passed if it ever existed. Maps will be shown in this report showing the distribution of leading colleges and high schools on railroad lines and at railroad junctions. In a word, the typical college must be accessible and the prosperity of a given institution may be greatly interfered with by its inaccessibility.

## 9. THE STATUS OF EDUCATIONAL DEVELOPMENT

A college is dependent in large measure upon the degree of educational development within its field. Unusual backwardness in educational development may neutralize many of the points heretofore mentioned. In some cases there is a fairly successful degree of coordination as between the various state institutions of a given state. In practically no case has such coordination been developed among the institutions belonging to the independent and denominational group. A low stage of development in elementary and secondary education curtails very naturally the potential supply of college students. The field and constituency of each institution must be studied from the standpoint of the status of development in all phases of education.

## 10. RESOURCES OF EXISTING INSTITUTIONS

These are available for most of the institutions of the country and are a determining factor in the establishment of a new college or in the development of a struggling college. These resources must be studied from many points of view, and have to do with personal and material considerations, such as educational standards, the scholarship of the faculty, academic recognition, the method of control, the character and extent of the curriculum, the methods of

advertising, the value of the plant and equipment and the amount of productive endowment.

The office of the Association and the Council of Church Boards of Education has already responded to numerous requests from Boards of Education and individual institutions for estimates as to the field and constituency of colleges as measured by these and other tests and possesses a large mass of data throwing light upon such problems in every state of the Union.